

REVISION OF THE LIST OF SIPHONAPTERA FROM NEW YORK STATE

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Since the writer compiled the original list of Siphonaptera from New York State¹ a sufficient number of changes, in the way of additions, synonymy, and the clearing up of the family status in the order (Ewing 1929), have occurred to warrant revision of the list.

All specimens included in the records of this revised list have been determined, or checked, by the author unless a name and date, within parentheses, immediately follow the record.

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Family HECTOPSYLLIDÆ

Echidnophaga Olliff.

E. gallinacea Westw.—This species has been reported from New York City by Fox (1925) as occurring on rats, presumably *Rattus norvegicus* Erxleben.

Family PULICIDÆ

Cediopsylla Jordan

This genus was referred to in the original list as *Spilopsyllus* Bak. but Jordan (1925) has pointed out that the species formerly referred to under this genus differ from the *genotype*, *S. cuniculi*, in having a labial palpus of four segments rather than one of two.

¹ Published in "A List of the Insects of New York" Memoir 101 Cornell University—Aug., 1928, pp. 868-869.

C. simplex Baker.—In the previously published list this flea was reported as having been taken in Ithaca on the cotton-tail rabbit (*Sylvilagus floridanus mearnsi* Allen). Additional collections are as follows: Ithaca, from skunk (*Mephitis nigra* Peale and Beauvois); and Duaneburg from the gray fox (*Urocyon cinereoargenteus cinereoargenteus* Schreber).

Ctenocephalides Stiles & Collins

This genus was formerly referred to as *Ctenocephalus* Kolenati but Stiles and Collins (1930) have pointed out that this name is preoccupied by *Ctenocephalus* Hawle and Corda, a trilobite, and incidentally, also by *Ctenocephalus* Linstow, a nematode. These two authors have proposed the new name *Ctenocephalides* to replace *Ctenocephalus*.

C. canis Curtis.—No new records have been added for this species. It is reported from New York City by Fox (1925) as occurring on rats, presumably *Rattus norvegicus* Erxleben, and from Schenectady from an unrecorded host by Felt. The determination of the latter specimen has been checked by the author.

C. felis Bouché was previously recorded on the cat (*Felis domestica* L.) from Ithaca and from an unknown host on Long Island. More recent records indicate, as would be supposed, a statewide distribution of this flea. The additional records of this species are as follow: New York City, on rats, presumably *Rattus norvegicus* Erxleben (Fox 1925); Ithaca, on red squirrel (*Sciurus hudsonicus* subsp.) and dog (*Canis familiaris* L.); Rochester, on dog; Oakfield, in house; Clinton, on man; Cleron, in cellar of house; Schenectady, in house; and Hornell, from an unrecorded host.

Pulex Linnæus

P. irritans Linn.—No new records for this species have been reported. It has been taken in a house in Springfield, from an unrecorded host in Schenectady, and from a man in Brooklyn.

Xenopsylla Glinkiewicz

X. cheopis Roths.—This species, rare in the northern United States, has not been reported from New York State since the

previous list was published. Fox (1925) recorded this flea from rats, presumably *Rattus norvegicus* Erxleben, in New York City.

Family DOLICHOPSYLLIDÆ

Catallagia Rothschild

No member of this genus was reported in the original list.

C. onaga Jord.—Jordan (1929) collected two males of this flea from the short-tailed shrew (*Blarina brevicauda* subsp.) at Lake Placid and described them as belonging to this new species. This collection is especially interesting since the other four species belonging to the genus are from Queen Charlotte Island, British Columbia, Alberta, and California.

Ceratophyllus Curtis

C. acerbus Jord.—This species did not appear in the original list but Jordan (1929) reports it from Lake Placid on the chipmunk (*Tamias striatus* subsp.). In the U. S. National Museum there are specimens, also from *Tamias striatus* subsp., collected at Chapel Pond.

C. asio Baker—Jordan (1929) reports this flea from Ithaca on "field mice."

C. fasciatus Bosc has been reported from Ithaca on rat, presumably *Rattus norvegicus* Erxleben, and on weasel (*Mustela* [*Putorius*] *noveboracensis noveboracensis* Emmons). Fox (1925) reports it from New York City, also on rat (*R. norvegicus* [?]). The latter record in some way was omitted from the original list.

C. gallinæ Schrank—In the list of 1928 this flea was reported only from an unrecorded host at Perry. Additional records are as follows: Barker, from hen house; Blauvelp, on man; Ithaca, from nest of English sparrow (*Passer domesticus domesticus* L.); Lake Placid (Jordan 1929) on chipmunk (*Tamias striatus* subsp.); and Mt. Kisco (Jordan 1928) in nest of *Passer domesticus domesticus*. *Tamias striatus* subsp. is obviously an accidental host.

C. niger niger Fox.—This species was recorded simply as *C. niger* Fox from Ithaca, on bluebird (*Sialia sialis* L.), in the original list. Jordan (1929) writes of this record, in view of the

fact that this is a western species, as follows: "doubtless included in the list by error in consequence either of wrong locality labels or erroneous identification." This specimen has been very carefully checked and certainly belongs to the species in question. It is, of course, possible that in some way or other a wrong label was placed upon this slide by the individual who made the mount. However, the data as preserved are those given above.

C. pseudarctomys Baker was recorded in the original list from Ithaca on the northern flying squirrel (*Glaucomys* [*Sciuropterus*] *volans volans* L.). Young's collection of the type in Newport from the woodchuck (*Marmota monax* subsp.) was recorded in the manuscript of the above mentioned list but was apparently overlooked by the printer.

C. quirini Roths. was reported from Lake Placid on the jumping mouse (*Napæozapus* [*Zapus*] *insignis* subsp.) by Jordan (1929). This species has previously been collected only in British Columbia and Alberta.

C. riparius J. & R.—No new records of this flea have been reported from New York State. As stated in the earlier list, it has been taken from the nest of the bank swallow (*Riparia* [*Clivicola*] *riparia* L.) and the belted kingfisher (*Ceryle alcyon* L.) in Ithaca and from nests of the bank swallow in Oleott.

C. vison Baker.—In the list of 1928 this flea was reported only from the weasel (*Mustela* [*Putorius*] *noveboracensis noveboracensis* Emmons) in Ithaca. Through some mistake the record of the type, collected on the mink (*Mustela vison* subsp.) in Peterboro, was omitted. Further records are as follows: Ithaca, on red squirrel (*Sciurus hudsonicus* subsp.); Lake Placid, on red squirrel (*Sciurus hudsonicus loquax* Bangs) and chipmunk (*Tamias striatus* subsp.) Jordan (1929); Heart Lake, on *Sciurus hudsonicus* subsp.; Peterboro, on *Mustela noveboracensis noveboracensis*; Long Lake, on *Sciurus hudsonicus* subsp.; and Clear Lake, on *Sciurus hudsonicus gymnicus* Bangs.

C. wickhami wickhami Baker.—This flea was originally recorded as *C. wickhami*, from Ithaca on red squirrel (*Sciurus hudsonicus* subsp.), white-footed mouse (*Peromyscus leucopus* subsp.), and northern flying squirrel (*Glaucomys* [*Sciuropterus*] *volans volans* L.); and from Halsey Valley on gray squirrel

(*Sciurus carolinensis leucotis* Gapper). Additional records are as follows: Ithaca, on chipmunk (*Tamias striatus* subsp.), short-tailed shrew (*Blarina brevicauda* subsp.), mink (*Mustela vison* subsp.), in rodent's fur in owl's nest, in siftings of decayed stump, on star-nosed mole (*Condylura cristata* L.), cotton-tail rabbit (*Sylvilagus* sp.), and on *Sciurus carolinensis leucotis*; Newport, on woodchuck (*Marmota monax* subsp.) and *Glaucomys volans volans*; Hunter, in old house; New York City, on weasel (*Mustela noveboracensis noveboracensis* Emmons); Lansingburg, from an unrecorded host; Lake Placid, on white-footed mouse (*Peromyscus maniculatus gracilis* Le Conte); Long Lake, on *Sciurus hudsonicus* subsp.; and Mt. McIntyre, on *Peromyscus maniculatus gracilis*.

C. cædens cædens Jordan is a new addition to the list of New York fleas. It has been collected on the red squirrel (*Sciurus hudsonicus* subsp.) at Valcou's Island (Lake Champlain), Long Lake, and Lake Placid.

C. cædens durus Jordan.—Jordan (1929) reports this flea from Lake Placid on the red squirrel (*Sciurus hudsonicus loquax* Bangs).

C. leucopus Baker.—In the original list this species was recorded as *Ceratophyllus leucopus* and was reported only from Peterboro, on the white-footed mouse (*Peromyscus leucopus* subsp.), by Baker (1904) as a new species. Jordan (1929) recorded it from Lake Placid and Mt. Kisco on *Peromyscus leucopus* subsp.

C. sexdentatus pennsylvanicus Jordan, an addition to the state list, has been collected on the wood-rat (*Neotoma pennsylvanica* Stone) at Schunemunk Mt., Orange County.

Conorhinopsylla Stewart

The only species known belonging to this genus has been found in New York.

C. stanfordi Stewart.—This species, only five specimens of which are known, has been collected and described since the publishing of the original list. All the specimens were taken in Ithaca from the red squirrel (*Sciurus hudsonicus* subsp.).

Ctenophthalmus Kolenati

C. pseudagyrtes Baker.—The distribution of this flea was published in the list of 1928 as from Selkirk on the hairy-tailed mole (*Parascalops breweri* Bachman); from Alpine in a mouse nest; and from Ithaca on the white-footed mouse (*Peromyscus leucopus* subsp.), the field mouse (*Microtus* [*Arvicola*] *pennsylvanicus* subsp.) and the muskrat (*Ondatra* [*Fiber zibethicus zibethicus*] *zibethica zibethica* L.). Later records show the following geographical and host distribution: Mt. Kisco, on *Microtus pennsylvanicus* subsp., and the short-tailed shrew (*Blarina brevicauda* subsp.) (Jordan 1928); Ithaca, on red squirrel (*Sciurus hudsonicus* subsp.), northern flying squirrel (*Glaucomys volans volans* L.), *Blarina brevicauda* subsp., in grass siftings, on star-nosed mole (*Condylura cristata* L.), and *Peromyscus leucopus noveboracensis* Fischer; Lake Placid, on *Parascalops breweri*, *Condylura cristata*, *Blarina brevicauda* subsp., the house-rat (*Rattus norvegicus* Erxleben) (Jordan 1929), and the chipmunk (*Tamias striatus lysteri* Richardson); Bronxville, from unrecorded host; Longville, from unrecorded host; and from Long Lake, on *Sciurus hudsonicus* subsp.

Oropsylla Wagner & Ioff

This genus was erected by Wagner and Ioff (1926) to include some species formerly referred to as *Ceratophylli*.

O. arctomys Baker.—The type of this species was collected on the woodchuck (*Marmota* [*Arctomys*] *monax* subsp.) at Peterboro by Miller and described by Baker in 1904. The list of 1928 gave the following records for this flea: McLean and Keeseville, on *Marmota monax* subsp., and Stamford, on red squirrel (*Sciurus hudsonicus loquax* Bangs). Additional records are as follows: Ithaca, on skunk (*Mephitis nigra* Peale & Beauvois); Hamilton, on deer (*Odocoileus virginianus borealis* Miller); Duanesburg, on gray fox (*Urocyon cinereoargenteus* subsp.); North Alba, on the woodchuck (*Marmota monax prebolorum* Howell); and Macedon, on *Marmota monax* subsp.

Trichopsylla Kolenati

T. lotoris Stewart.—This flea was reported in the original list from Olcott, on the raccoon (*Procyon lotor lotor* L.). No additional collections have been reported from New York State.

Family ISCHNOPSYLLIDÆ

Myodopsylla Jordan & Rothschild

M. insignis Roths.—This species was reported in the original list as occurring on the little brown bat (*Myotis lucifugus lucifugus* Le Conte) at Homer and on the bat (*M. subulatus subulatus* Say) from Ithaca. No additional records have been reported.

Family HYSTRICHOPSYLLIDÆ

Ctenopsyllus Kolenati

In the original list of fleas from New York State this genus was referred to as *Leptopsylla* Jord. & Roths. Wagner (1927b) pointed out that Oudemans (1906) did not understand a previous paper of his in which he pointed out that Kolenati would have shown better judgment had he called his genus "*Ctenopsyllus*" rather than "*Ceratopsyllus*." Oudemans thought from Wagner's paper that *Ctenopsyllus* had been used for *Ceratopsyllus* and consequently sunk Kolenati's *Ctenopsyllus*. Jordan and Rothschild (1911), following Oudemans's statement, without rechecking, proposed *Leptopsylla* for *Ctenopsyllus* which actually was valid. The present writer, following Jordan and Rothschild, used the name *Leptopsylla* in the above mentioned list.

C. catatina Jordan was not recorded in the original list. Jordan (1929) records this species from Lake Placid on the hairy-tailed mole (*Parascalops breweri* Bachman), the short-tailed shrew (*Blarina brevicauda* subsp.) and the meadow-mouse (*Microtus pennsylvanicus* subsp.).

C. hesperomys Baker.—This flea was reported in the list of 1928 as follows: Ithaca, from vacated king-fisher's nest and on the white-footed mouse (*Peromyscus leucopus* subsp.); and Alpine, in mouse nest. No additional distribution records have been reported.

C. segnis Schön. (= *L. musculi* Dugés).—No additional collections of this flea in New York State have been reported. The record previously reported is from New York City on rat (Fox 1925), presumably *Rattus norvegicus* Erxleben.

C. selenis Roths. has been collected at Mt. Marey on the white-footed mouse (*Peromyscus maniculatus gracilis* Le Conte). This

record is of especial interest since all other collections of this insect have been made in British Columbia, Alberta and Manitoba.

Doratopsylla Jordan & Rothschild

No representative of this genus was recorded in the original list.

D. blarinæ Fox.—This flea has been taken at Ithaca on the short-tailed shrew (*Blarina brevicauda* subsp.), and at Mt. Kisco (Jordan 1929) on the same host.

D. curvata Roths.—Jordan (1929) reports this species from Lake Placid on the short-tailed shrew (*Blarina brevicauda* subsp.). This flea was formerly considered to be a western species, having been collected only in Alberta, Minnesota, and Iowa.

Hystrichopsylla Taschenberg

This genus was not represented in the list of 1928.

H. gigas tahavuana Jordan.—Jordan (1929) collected, and described as new, this flea at Lake Placid on the short-tailed shrew (*Blarina brevicauda* subsp.) and the meadow-mouse (*Microtus pennsylvanicus* subsp.). He points out that *Pulex gigas* Kirby (1837) is an *Hystrichopsylla* and further states that it is highly probable that “*Pulex gigas* is the same flea as *Hystrichopsylla dippiei* Roths. from Calgary Alberta.” However, in accordance with Jordan (1929) it is advisable to secure more material from Northern Alberta before definitely stating that *H. gigas* is a synonym of *H. dippiei*.

Neopsylla Wagner

N. grandis Roths. was not reported as such in the original New York State list. However, it was reported as *Ctenophthalmus gigas* Kirby from Ithaca on the red squirrel (*Sciurus hudsonicus loquax* Bangs) and as *Neopsylla striata* Stewart from Ithaca in the nest of a chipmunk (*Tamias striatus lysteri* Richardson). The first synonym arose from what probably was an erroneous identification by Baker (1895). The second synonym also arose from a misidentification, due largely to the rarity of the species in collections and consequent unfamiliarity with it. Jordan

(1929) states he has seen only five specimens of this flea. Additional records of distribution are as follows: Ithaca, on *Tamias striatus lysteri* and from Lake Placid (Jordan 1929) on the same host.

N. wenmanni Roths. was previously reported as *Ctenophthalmus wenmanni* Roths. from Ithaca on the white-footed mouse (*Peromyscus leucopus* subsp.) and as *Neopsylla similis* Chapin from Ithaca in grass siftings. Both of these forms are now known to be *Neopsylla* belonging to the species *wenmanni*. Records subsequent to the list of 1928 are as follows: Ithaca, on short-tailed shrew (*Blarina brevicauda* subsp.); Lake Placid, on the hairy-tailed mole (*Parascalops breweri* Bachman) and *Peromyscus leucopus* subsp. (Jordan 1929); and Elma, on the weasel (*Mustela cicognanii cicognanii* Bonaparte).

N. testor Roths.—This flea was reported in the original list from Lansingburg in a nest which might have belonged to a mouse. One specimen was collected by Felt and determined as a new species by Rothschild. No additional collections have been made in New York State.

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It will be of interest to all workers in biology and to nature students everywhere to learn that the Council of the Biological Society of Washington just recently has reissued all the various parts of its Proceedings formerly out of print, and can now supply a limited number of complete sets of its Proceedings, volumes 1 to 46, 1881 to 1933, inclusive, or can also supply whatever parts may be needed to complete partial sets now in the libraries of individuals or institutions. Among the items again available is the formerly very rare Volume 3, July 1, 1884, to February 6, 1886, now lacking from a considerable number of otherwise complete sets. This volume contains, pages 35 to 105, inclusive, the well-known work by Dr. G. Brown Goode entitled "The Beginnings of Natural History in America," the continuous demand for which contributed to the speedy exhaustion of the original edition. Lists of desiderata or requests for information should be sent to the Society's Corresponding Secretary, J. S. Wade, U. S. Bureau of Entomology, Washington, D. C.